## Water Tunnel Now Under Construction

A water tunnel facility which will perform the same kinds of tests for underwater vehicles as a wind tunnel performs for aerodynamic shapes is now under construction in Area III.
Designed by John T. Finger of Facility Engineering Division 7311, the water tunnel will produce a flow velocity up to 600 feet per second. Primary purpose of the tunnel will be to study cavitation (the air bubble which forms around bodies moving rapidly under water) effects on various contours of water-entry shapes.
"Our obectives in water-tunnel testing are to study the tendency of different shapes to cavitate and to obtain a correlation between drag coefficient and cavitation number so that underwater trajectories can be accurately plotted," John says.
The new facility is being built adjacent to the existing water-jet catapult facility so that the same control and data recording systems and air compression systems can be used for both facilities.
To keep down the cost of this facility as much as possible, three huge surplus gas-storage tanks were obtained from a phased-out Atlas silo. (New tanks would have increased the cost of the facility about $\$ 170,000$.)

One of the tanks was extensively modified to provide the nozzle section of the water tunnel. This tank, which will be mounted vertically over a test chamber, will be filled with water during a test. The other two tanks will be filled with air compressed to 3500 pounds per square inch. A fast-opening valve will be used to trigger the test. When the valve is released, compressed air will force the water to rupture a membrane at the bottom of the test chamber, allowing the water in the vertical tank to flow through the test chamber and around the model undergoing test. Model shapes up to three-fourths of an inch in diameter will be tested.

The section of the tank where the model is to be placed will be transparent plastic material to allow for high-speed photography. Strain gages, pressure gages and other instrumentation will be used to gather the required data.


ARTIST'S SKETCH of the new water-tunnel facility now under construction in Area III shows arrangement of the three surplus Atlas gas-storage tanks. The vertical tank (mounted in 65 -foot-high tower) will be filled with water, the other two tanks with compressed air. Triggering a fast-opening valve will release the air pressure to force the water through a test chamber (not shown) at a velocity up to 600 feet per second.

Before the present water-tunnel facility was designed, various tunnel design concepts were tested by using a chamber which could accept the water stream from the water-jet catapult facility.
"This preliminary work may save a long de-bugging of the new facility, and test programs on model shapes may begin right away," John says.
The facility is expected to be completed
about mid-October. It is being built at a cost of $\$ 89,000$ by Jack B. Henderson Construction Company of Albuquerque. Necessary equipment will increase the total facility cost to $\$ 225,000$. Plant Engineering Department 4540 project engineers for the water tunnel are Tom Eglinton, mechanical; V. O. Easley, electrical; and Cecil Morrisett, structural.


## H. C. Donnelly To Head AEC-ALO

 Starting August 12On Aug. 12, Harold C. Donnelly becomes Manager of the Atomic Energy Commission's Albuquerque Operations Of fice.
No stranger to Albuquerque or Sandia Base, Mr. Donnelly was Commander of Field Command, Defense Atomic Support Agency from 1960 to 1963.
His most recent assignment was Director of the Defense Atomic Support Agency in Washington, D.C. He retired from the Air Force after more than 35 years of military service.
His distinguished military career in cludes serving as Deputy Chief of Staff and then Chief of Staff of the IndiaBurma Theater in World War II, Military Executive to the Secretary and Undersecretary of the Air Force in 1950-51, Chief of Staff of the Armed Forces Special Weapons Project, Chief of Plans and Policy Branch for SHAPE, Assistant Deputy Chief of Staff for Air Force Plans and Programs, and Deputy Chief of Staf for Air Force Research and Development
His decorations include the Distinguished Service Cross, Legion of Merit with two Oak Leaf Clusters, the Order of the British Empire Officer Class and the French Legion of Honor.

ASM Chairmanship For F. R. Sweet


The American So ciety for Metals has reappointed Fred R Sweet (9133) to the ASM Technician Committee and named him chair man, effective Sept 1. The appointmen is for one year. this committee, Mr Sweet automatically becomes a member of the ASM Education and Development Council.
Mr. Sweet has been at Sandia nearly 12 years and is assigned to Field Test En gineering and Construction Division

## Teenagers Learn Basic Algebra Through Patience of Sandia Volunteers

"They're very receptive. I'm amazed at how hard they are working this summer." "Algebra is a subject which many fail. This training will ensure better success in understanding the subject.'
These are typical statements from three Sandia mathematicians, Don R. Morrison (1713), Fred R. Norwood (1721) and Diane Holdridge (1711), who are unselfishly donating two evenings a week to tutor a group of teenagers in the Martineztown section of Albuquerque.
The assistance was requested by Sister Dominic of San Ignacio parochial school brought together by Armando Bernal of the Office of Economic Opportunity This class might be considered a high schoo version of the popular Headstart program (originally set up to better prepare children from diverse cultures who are about to enter first grade)
Initially 10 children signed up for the algebra assistance. Dropouts haven't been a problem; instead one additional youngster has been added to the rolls. All will enter 10th grade this fall. Enrolling in the course was not a question of "flunking out;" rather it was a case of their trying to do better than average in the subject.
Fred offers a formal course in algebra and Don and Diane help with a more in dividual approach. Fred's wife, Irene, also assists the youngsters when they encounter a problem.
"With teenagers, there's no language
problem to be overcome and they respond when they realize people are interested in helping them," Fred explains. "The idea is to challenge and inspire them to learn what's difficult.
Fred has had experience in tutoring and teaching on all levels - from pre-schoolers
learning the alphabet to adults preparing for doctoral oral examinations. Don has taught in high school and at the university and has tutored non-English speaking adults. Diane has had teacher trianing at the junior high school level
Since the informal program began in
early July, the teenagers have covered much of the theory presented in the first two or three months of high school algebra. Initially Don thought, "That's too much to expect. You can't use a 'sink or swim approach. My inclination was to be in-

"YOU UNDERSTAND, don't you?" Diane Holdridge (1711) asks Robert Olivas, whom she tutors in math. Looking on are Margaret Sandoval and Elizabeth Villescas (right),


ALGEBRA TUTORING during the summer months has been given by Fred Norwood (1721) to youngsters in the Martineztown section of Albuquerque. Here he explains a point to Steven Archibeque.


VIIITING SANDIA LABORATORIES recently was Lt. Gen. Austin W. Betts, Chief, Research and Development, U.S. Army. He talks with President Hornbeck during a technical briefing.

## Two More Sandia Women Achieve 'Professional Secretary' Status

Two Sandia secretaries were informed recently that they had passed the stringent requirements to become Certified Professional Secretaries. Six other Sandia Virginiave already achieved this status. State and Y. Bonnie Sharp was recently promoted to department secretary for Solid Dynamics Research Department 5160. Both were members of a noon-hour CPS study group conducted by Jean Langston (5200 and Helen Walsh (5400) and sponsored by Employee Training and Education Division 3132 .
To qualify for certification, the secretary must successfully complete all six parts of the CPS examination. The subjects include personal adjustment and human relations, business law, business administration, secretarial accounting, secretarial procedures, and secretarial skills. Virginia and Bonnie passed arst time cept the argia then they took the in secretarial accounting at took a coursity of New Mexico while Bonthe university intensive studying at home. nie did sor they both passed this section This year they both.
of the examination. Virginia's husband is military service, and she has worked in many states for either the Civil Service or for a public school system. She was with the Albuschool system. She was for several years quefore joining Sandia in 1965. Her first assignment was in the Purchasing organization.
"I find that if you have the proper motivation, you wi

Bonnie became interested in the CPS Bonnie beca she lived in Wichita, Kans., program whetive in the local chapter of analional Secretaries Association (International).

Only three secretaries from New Mex co received the CPS rating this year.

## SANDIA LAB NEWS



SANDIA LABORATORIES ALBUQUERQUE, NEW MEXICC
IVERMORE, CALIFORNIA


Staff: Cherry loo Burns. Rober po Gall,





LATEST SANDIA secretaries to attain the rating of Certified Professional Secretary are Virginia Hagan (5153), left, and Bonnie Sharp (5160.)

## Continued from Page One

## Learn Algebra

dividualistic in helping each student with his problems." But Fred believes that once you know the basic rules, it's merely a question of applying those rules to exercises and problems. "I give them lots of homework," Fred says. "It's the best way to learn because they must sit down by themselves and learn to think out the answers."
Before the course ends later this month, the youngsters will also be briefed in set theory and modern mathematics
Why the emphasis on algebra? As Don explains, "The world is getting more scientific even at elementary levels, and algebra is very fundamental." Fred points out that algebra is not only a requirement for entrance to most colleges (and these teenagers are encouraged to go to college i at all possible) but it also is a requirement for entering many training and pre-apprenticeship programs.
The three Sandians hope to continue coaching this same group of teenagers in other subjects.
Meanwhile, additional persons are needed to help tutor other children in a variety of subjects, as meeting spaces become available. Either Don, Fred or Diane can provide information.


THOMAS B HEAPHY to manaDepartment 3460 , effective Aug. 1. Since November 1967, Tom has been supervisor of Employee Publications Division 3432 and editor of the SANDIA LAB NEWS. He was promoted to division supervisor in December 1963 and has headed Technical Information groups and Graphic Ar Scheduling and Programming Division.

He joined Sandia Laboratories in February 1952 after taking graduate courses at the University of New Mexico. His undergraduate work was primarily at Fordham University, but both his Bachelor's and Master's degrees in English are from UNM. He was a Chief Pharmacists Mate in the Navy during World War II.


GEORGE BANOS Compliance, Audit and Test Division 3233, effective Aug. George joined Sandia in August 1955 and has worked in administrative support ortesting, cost accounting, benefits and services, job evaluation and compensation, personnel placement, and in equal employment opportunity administration.
Before joining Sandia, he was a management trainee with a large retailing organization.
He earned his BBA degree from New Mexico Highlands University in 1954 and has done some graduate work.
During 1946-49, George served in the Army, stationed for two and a half years in Germany with the Army Security Agency. He was recalled during the Korean conflict and served two years, stationed primarily at Kirtland Air Force Base.

## Authors

F. L. Vook (5111), "Anistropic Thermal Conductivity of Electron-Irradiated CdS," July 1, issue, APPLIED PHYSICS LETTERS.
E. S. Roth (5434), "Review of Handbook of Industrial Metrology," July issue, QUALITY PROGRESS.
R. T. Johnson, Jr. (5132), "Fast-Neutron Irradiation Effects in CdS," July issue, JOURNAL OF APPLIED PHYSICS
E. D. Jones (5151), "Nuclear Magnetic Resonance Measurements in PtP ${ }_{2}$ and PtAs,", July 1 issue, PHYSICS LETTERS. G. A. Samara (5132), "Pressure Dependence of the Dielectric Properties of SiSI," July 1 issue, PHYSICS LETTERS. R. H. Braasch (1223), "The Distribution of ( $\mathrm{n}-\mathrm{m}$ ) Terms for Maximal Length Linear Pseudo-Random Sequences," July issue, IEEE TRANSACTIONS ON INFORMATION THEORY.

Albert Narath (5100) and H. H. Weaver (5153), "Nuclear Magnetic Resonance and Relaxation of 195 Pt in Platinum-Palladium Alloys," June issue SOLID STATE COMMUNICATIONS
G. C. Tisone (5232) and L. M. Branscomb (Joint Institute for Laboratory from H- and O- Negative Ions by Electron Impact," June 5 issue, PHYSICAL REVIEW.
L. B. Smith (5235), "An Observation of Strong Thermospheric Winds During a Geomagnetic Storm," August issue, JOURNAL OF GEOPHYSICAL RESEARCH.

## Events Calendar

Aug. 9-10-Albuquerque Civic Light Opera Assn. production of "Funny Girl." UNM Concert Hall, tel. 277-3121.
Aug. 9-11, 16-18, 23-25 - Shakespeare's "Twelfth Night." Corrales Adobe Theatre, tel. 898-2932.
Aug. 9-11-All-Arabian Horse Show, State Fair Coliseum.
Aug. 9-11-Inter-Tribal Indian Ceremonial, Gallup.
Aug. 9-"The Bassarids"; Aug. 10, "Der Rosenkavalier"; Aug. 14 and 16, "Persephone" and "Die Jakobsleiter" (American Premiere) ; Aug. 15 and 21
"La Traviata," Santa Fe Opera.


ERROL P. EERNISSE to supervi sor of Device Phy
sics Research Di vision 5112, effec tive Aug. 1 .
Errol joined Sandia Laboratories in June 1965 after re ceiving his PhD degree at Purdue arned his BSEE at South Dakota State University in 1962 and MSEE at Purdue in 1963.
Since joining Sandia he has been engaged in research on linear and noninear properties of ferroelectric materials He is co-author with R. W. Holland (5242) a book entitled "Analysis of Resonan Piezoelectric Structures" soon to be pub Mr Press, and pepers on his research specialties.
He is a member of Sigma Xi , research honorary society; Eta Kappa Nu, EE honorary; Sigma Tau, engineering honorary; and Phi Kappa Phi, academic honorary. He is also a member of the Acoustical Society of America and the Institute of Electrical and Electronics Engineers.


WILLIAM J WAGONER to supervisor of technical Division III 3413, effective Aug.

Bill has headed Audio Visual Presentations Section 3412-1 for the past year. He was proIllustrations and Presentation Art Section in December 1966.
He joined Sandia as an artist in a manuals preparation section in May 1960 and moved to the commercial and animation art group seven months later.
Bill studied general art at John Herron Art Institute in Indianapolis from 1950 to 1952 and then enrolled in Hamline University. From 1953 to 1955 he served with the Army as an instructor at Redstone Arsenal and as an illustrator at White Sands Missile Range.
In 1955 he returned to Hamline University where he received a BA degree in art education in June 1957. He earned his MA degree in art history from the University of Chicago in 1960 .

## Research Technician on Science Education Panel

 Hale R. Farley
$(5235)$ was one of three research technicians invited to participate in the Conference on Sciience in Technical Education, held in Washington, D. C., July 22-23.
was sponsored by the Commission on Science Education of the American Association for the Advancement of Science and was a direct outgrowth of the Nation was held in ron wing was her spring. At the clinic, Hale was one 14 Sandia technibu wo the cators from throughout the country his graduate.
Purpose of the Washington meeting was to take a hard look at how science and mathematics is taught in junior and community colleges and in technical institutes. Hale was a member of discussion groups on "Technicians in the Labor Force," "Institutions," and "Courses in Science and Mathematics."

Another participant was George W. Elliott who is on leave of absence from Sandia and who represented Washington Technical Institute at this conference. He was also on the "Technicians in the Labor Force" panel as well as two other discusion groups.


SUMMER HIRES discuss aspects of their employment at Sandia Laboratories Livermore They are five of the 14 people assigned to technical and staff services organizations for
the summer months. (Left to right) Archie S. McArthur, Ira L. Silver, M. Jerry Kenig, Donald W. Edick and Robert L. Berger.

## Summer Hires Tell of Contribution

During the summer months, Sandia Laboratories Livermore employs university and high school faculty members and students with advanced degrees. Under this continuing program, it is expected that the interchange of ideas and experiences between these people and the permanent staff will prove mutually beneficial.
The comments of five of the summer hires were obtained when the LAB NEWS asked them, "What has been your con-

## Archie S. McArthur

(Mechanical engineering instructor at Chabot College, Hayward. Assigned to Electric Design
"From my viewpoint, I would like to Fe contributed more because I feel that I have gained more than I have given.
"When I return to teaching in the fall, those students unaware that industry expects them to think as well as draw will have the opportunity to learn how this can best be done. In addition, my experience at Sandia will help me to cope with the natural skepticism students have about natural skeptrs who do not possess the pracical experience to back up the theory presented in the class."

## Ira L. Silver

June 1968 doctoral graduate of Columbia University with a specialty in nuclear engineering. Assigned to Maerial Science Division 8311 since June 17.)
"Right now I'm acquiring materials and designing apparatus needed to start an experimental program for measuring the physical properties of molten metals. In itially, I'd like to determine the density of aluminum at the highest temperature possible-such as $4000^{\circ}-4500^{\circ} \mathrm{F}$. Determin ing its density and electrical conductivity at these temperatures may open the way or measuring these characteristics in othe materials. Measurements at these temper atures are difficult. Hopefully, by October I'll have written results on the project."

## M. Jerry Kenig

(Member of engineering faculty of Delphia Pa Assigned to Analytical Division 8334 since June 10.)
"My contribution will be in two area rimarily.
"One is presenting to the present staf my points of view about solid mechanic that were acquired during my teaching and consulting experiences.
"The other is an analysis of a confined exploded wire to estimate the pressures and temperatures that can be achieved The concept may be applicable to equa-tion-of-state determinations not readily obtained by other techniques.

## Donald W. Edick

Instructor at Amador High School in Pleasanton. Assigned to Electronic Fabrication Section 8223-3 since June 17.)
"Although I consider my work in the orinted wiring laboratory and on the fab-
ration bench productive, the real bene ficiaries will be my students. The ad vanced and precise techniques learned here will enable me to give students first-hand awareness of the electronic technology required in industry today My experience will also prove valuable for implementing changes to our exist ing electronics program. Hopefully, the students will be motivated to seek educa tion beyond the high school level.'

## Robert L. Berger

(Doctoral student at University of California's Department of Applied 8174 since June 24. )
"Up to now, I have been studying the Sandia-Livermore version of the Dimension Transport FORTRAN (DTF) computer code.
"I'm presently adapting the DTF computer code for use on the computer available at Livermore. The input instructions to the code have already been simplified and condensed by others to reduce the computer time necessary to process certain complex problems. This has been done without destroying the integrity of the code. Further clarification of the terminology used by the DTF code is necessary so that the terminology relates more closely to the physical situation. As soon as these problems are resolved, I expect to have for use by designers illustrative examples of the code's capabilities."


MANEUVERING A KAYAK through the turbulent currents of California's Stanislaus River is "relaxation" for Sandians Clyde Seibel (left) and Vic Ham (both 8252). They are two of a group of Sandia Laboratories' draftsmen who "float" rivers in light-weight kayaks
which they have designed and built.

## LIVERMORE NEWS

## Take Note

Janice Marshall (8243) and Gloria Ramil (8242-1), summer hires under the Youth Opportunity Campaign, were two of the five recipients of scholarships awarded recently by the Livermore Chapter of the American Business Woman's Association. Both plan to major in business next year at Chabot College in Hayward.

Stanley W. Zehr of Materials Application Division 9312 was co-author of an article, "Superplasticity and Lead-Tin Alloys," which appeared in the June issue of the AMERICAN SOCIETY OF METALS TRANSACTIONS quarterly. Content of the article was part of his doctoral thesis work at the Massachusetts Institute of Technology. Prof. W. A. Bachofen of MIT was the other author.
Evelyn Bachman, technical illustrator in Graphic Arts and Presentation Services Division 8233, is one of five local artist who are showing their work in featured exhibits by the Livermore Art Association this month. Evelyn is displaying pastel encil and ink drawings at the Bank of America in Livermore.

## Congratulations

Mr. and Mrs. Steve Burchett (8314) a daughter, Sherri LeAnn, July 22. Mr. and Mrs. Hollis Miller (8245) a son, Dean Carl, July 18.

## Sympathy

To Betty Pajari (8171) for the death of her husband in Livermore, July 29. To Bob Crow (8236) for the death of his father in Atlanta, Ga., July 28.

Death


Roger K. Woodbury, metallurgical engineer in Materials Application Division 8312, died in a local hospital July July 20. He was 38. Since joining Sandia Laboratories at Livermore in February 1961, he worked primarily on
brazing and joining techniques.
Survivors include two small sons, two
brothers, and his parents.

## Welcome

## Newcomers



July 2 - July 15
 8252
8253
8223
8252
8252
8172
${ }^{\mathrm{New}}$ NHerman M . $\qquad$ 8242
Oregon
Gary ..... 8183
Utah
Neal ..... 8252
Washington
A. Ashley $F$. ..... 8334
Returned from Leave
Ronald E. Allen, Tracy
Aldred L. Stevens, Lar

Transfers from Albuquerque
Ralph W. Kelley


## 'Floating' Rivers Relaxing Diversion For Livermore Draftsmen-Kayakers

The ideal relaxation for six Sandia Laboratories draftsmen is "floating" the rivers of California in two-man kayaks designed and built in their garages.
The men may call it floating, but maneuvering a kayak down a stream of rushing rapids and tricky currents is anything but relaxing. The relaxing must come lat

Floating a swift stream ("white-water Kayaking" might be more appropriate) requires quick reflexes, constant attention and maximum coordination between two experienced paddlers. Each back-paddle to keep the craft headed downstream. To
get caught at right angles to the stream usually means two wet occupants
The kayaks used by the Sandians resemble commercially available craft only in frame-design, length and width. Other features, such as materials for the frame, vary according to the desires of the dekayak light but strong ayak light but strong
"Weight becomes particularly import"whe" explains Bill Williams (8252-3), ged nerrain and carry the kayak over rugged terrain and through steep canyons in are never accessible spot. The best places are never accessible by car

Kiln-dried fir and marine plywood are used for the frame of the $171 / 2$-foot, 56 pound kayaks (commercial ones usually weigh $80-100$ pounds). The bottom skin is heav-gauge nylon Both materials top is light-gauge nylon. Both materials are secured tightly staples. Spray covers staples. Spray the men's waists while und snuggly are laced to the frame with nylon cord With the purchase of two nine double-bladed paddles, flotation bladders (for each end of the kayak), and a life jacket, the buoyant craft is ready for fast waters. waters.
"Even at 10 miles an hour," relates Bill, "there's no time for strategy discussions. Although the man in the stern is responsible to the man in the bow, both tically to one another. Both, too, must watch below as well as above the surface of the water. Anything closer than five inches to the surface is a hazard because of the kayak's shallow draft. This concerns us because we're sitting very close to the bottom of the thinly covered hull."

Such avid fans of "floating" naturally choose to share their enthusiasm for the sport with others.

Later this year, Bill, Jim Dremalas, Bob Graham, Vic Ham, Clyde Seibel and Jerry Stewart (all Division 8252), plan to take their wivcs on a five-day, 170-mile trip
down California's Klamath River. down California's Klamath River
"If the wives don't share our interest in the outing," grins Bill, "the men may be spending 50-60 hours making one-man kayaks."


ELEVEN SECONDS is about how much time it takes Joe Silva and his brother to rope the head and rear leg of a Mexican longhorn calf in team roping events. For individual in about 16 seconds. The fast action is part of the Sunday afternoon rodeo at Tome.

## Joe Silva and the Tome Roping Club

## What Do Cowboys Do on Sunday? Rope Calves for Fun, Naturally!

The gate bangs open and the grayish long-horned calf streaks toward the far side of the arena. The cowboy, with rope looped and ready, yells at the top
lungs as his horse leaps forward.
Spectators-sitting on fences and on horses near the corral-yell encouragement.
The cowboy's rope, now twirling in a wide loop above the charging horse, flash es in the afternoon sun. As the rope is thrown, the horse stiff-leggedly halts his headlong charge at the calf. The loop tightens around the horns, and the calf is jerked up short.
The cowboy leaps from his horse charges the calf, tosses it on its back and wraps a small rope around is legs. He aises an arm as he leaps backwards to his feet.
The timekeeper yells, " 16 seconds."
The spectators cheer.
The cowboy, Joe Silva (2633), grins as he releases the calf and rewinds his rope He slaps the neck of the horse rapidly "Bueno," he says. "Well done, Mousie." A horse is as important as the cowboy in his sport.
It's a medium-sized horse, mouse colored, a mixture of grey and brown, and livearound, her head bobbing, as Joe pats her neck. He remounts and rides toward the spectators, grinning beneath his widebrimmed straw hat
Joe is president of the Tome Roping Club, a friendly group of keenly competing cowboys. Tome is a small ranching and farming community about 30 miles south of Albuquerque on Highway 47. The people who live there are much like Joe-their families have lived in this area for years their histories tracing back to Spanish colonial days. They build their own large and comfortable adobe houses, raise al and graze cattle on the Tome Land Grant The gardens are lush with green chilies and red tomatoes-prime ingredients for the barbecue which is more than likely to take place after one of the Sunday afternoon roping sessions.
Somebody ignites the charcoals under the hamburgers while somebody else prepares the pot of beans. Neighbors and oping.
"We sure clobbered those guys from Belen. Bosque cowboys can't tie a rope, much less throw one. The big gray stalion from Peralta looked good, but the calf was better."
The arena was built about three years ago, a group effort, and the roping club purchased the stock-rangy Mexican long horns, fast and unpredictable.
The informal rodeos are held every Sunday afternoon in the summer. (Shades of he corrida in the New ico sun set!) Joe has been president of the group
since it was organized-not so much because he usually wins the roping contest but because he is an organizer and administrator. He keeps the books and sees to it that the operating expenses are met
"We have a great time," Joe says. "Cow boys rope calves as part of the day's work and after a hard week on the ranch you might as well rope some more for fun." Joe's own schedule starts about 5 a.m.


JOE SILVA (2633
-president of the Tome Roping Club-
with a few chores around his place before starting the ride to Sandia. After work, the long summer daylight hours provide enough light for more chores. His lush fields of alfalfa are located between two irrigation ditches and keep him busy with watering and mowing. On weekends, he loads either Mousie or his other horse in a trailer and drives to the foothills of the Manzanos where his cattle graze. He checks the herd, the water supply, the salt, and the grass. Periodically, he brands the calves, rounds them up, and drives them to the yards for sale.

He also manages to work on his house. More than two years in construction, the 1550 -square-foot adobe is almost complete.
"But there's always something else to do," Joe says. "Fences, cabinets, furni-ture-something."
Still, Sunday afternoons are for calf roping. It's the highpoint of the week for the Tome cowboys, and the chores have
to be mighty important before they miss a session.
"C'mon down," Joe says. "Everyone is welcome."

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SANDIA LAB NEWS
AUGUST 9, 1968

## Retiring


$\underset{\text { singer }}{\text { Erwin }}$ C. Filsinger, a staff assistant in the temperature group of Physical Standards Division 7451, is retiring the end of the month. He joined Sandia in January 1952 and was assigned to the quality assurance organization. He transferred to his present position in 1959. Before coming to the Laboratories, Erwin had been a production supervisor for a steel fabricating company in Missouri.
About eight years ago, Mr. and Mrs. Filsinger purchased seven acres of land in San Ysidro, N. M. The purchase included the shell of an adobe house. Erwin and his wife have spent weekends restoring the house and now have a permanent retirement residence. In addition to the restoration, Erwin, who has done most of the work himself, has added a double garage, an extra bedroom, a 24 - by $14-$ foot screened patio and a large workshop. He is presently constructing a small greenhouse, and has several other small projects scheduled. "I would guess that I have a couple more years of work on the place before I'm finished," he says.
In addition to his carpentry activities, Erwin does black and white pencil drawings of almost any subject, and he has a complete lapidary outfit. He also shares his wife's interest in gardening-their property has flower gardens, a vegetable garden and an orchard.

E. Alice Preist (7631-2), a design clerk at Sandia Laboratories, is retiring the end of this month. She was employed as a clerk in July 1954 and has been assigned to the drafting organization since 1955 .

Alice was born in Liverpool, England, and came to America in 1927. She lived in New York City before moving to Albuquerque. Since coming to this country, land and hopes to return next year for a visit with family and friends.

Alice's immediate retirement plans include a month's vacation with her cousin in California. "When I return to Albuquerque," she says, "I'm going to do volunteer hospital or rehabilitation work.
"I have been very happy working at Sandia. I'll continue to live in Albuquerque and will keep in touch with my friends. In addition to the hospital or rehabilitation work, I'll be doing some sewing or my church and friends. The most important thing for people who are retired o remember is to occupy yourself with something you enjoy and to keep busy."


## Deaths

Kenneth B. Stiver, a signpainter in Maintenance Service Division 4514, died suddenly Aug. 3. He was 55.
uddenly Aug. 3. He wask at Sandia Laboratorie since December 1948.
He is survived by his widow, Heste (6021), one son and two grandsons.

Roch W. Bradshaw, Jr., a programmer in Data Division 7331, died Aug. 3. He was 42 .
He had worked at Sandia since May 1955.

Survivors include two daughters and one


Lester M. Bierly, chemical stores material handler in Storage \& Stocks Section 4614-4, will retire Aug. 30. He has been employed by Sandia since October 1959. Before coming to Sandia he was a carpenter

## builder.

Mr. and Mrs. Bierly will continue to live in Aibuquerque at 243 Rhode Island NE. Their son, William, also works at the Laboratory in Diagnostic Aircraft Section 9252-1.
Lester plans to resume carpentering after his retirement.


Clarence P. Canady is retiring Aug. 30 after more than 16 years at Sandia He joined the com pany in June 1952 as a machinist. He also worked in the inspection and the tions. In 1960 he tions. In 1960 he was promoted to a
staff assistant in worked for in engineering where years in supplier evaluation. He has been in his present position in Process Application Division 5414 for the past year and had been with the Santa Fe Railroad for 30 years.
"I have worked for 49 years," Clarence says, "and I'm ready to retire. In fact, I'm marking off the days on a calendarI'm just like a kid waiting for Christmas." Mr. and Mrs. Canady will keep their home in Albuquerque, but they will do a lot of traveling. "During my years at Sandia," Clarence says, "I traveled over 200,000 miles on company business, but didn't really see any of the country Now that I'm retiring, my wife and I will enjoy some leisurely travel," First trip on their agenda will cover the Northwest. They then plan to spend November in the in terior of Old Mexico. Another interest shared by the Canadys is fishing. "We fish year 'round - through the ice in win ter and in lakes and streams the rest of the year."


The month of August is a big one completes 20 year service at Sandia Laboratories on Aug. 16, and two weeks later closes out his career at Sandia with an ear ly retirement.
When Jack joined the company in August 1948, he was assigned to the radar section of field test During his years with that organization he helped install radar facilities at Salton Sea Test Base and Nevada Test Site. He has been with Sensor Systems Division 9232 since January 1965.
Jack moved to Albuquerque from Missouri in 1947. "I wasn't sure if Albuquerque was in New Mexico or Arizona but we were looking for a good climate. When we arrived in Albuquerque, we decided this was it."
Jack has recently purchased a small, elf-contained camper trailer. "Now I can get up and go if I feel like it," he says. "I'm taking early retirement to make certain that I'll get to do the things I've al ways wanted to do - while I'm still in good health and able to enjoy them. I'm going to take advantage of these extra
years and Sandia's early retirement plan."

## Sympathy

To J. R. Meikle (7640) for the death of his mother on June 19.
To R. M. Hooper (3246) for the death of his mother in Burk Burnett, Texas, July 21.

To D. H. Winner (3247) for the death of his mother-in-law in Cleveland, Ohio, July 13.

To Wayne Trump (3132) for the death
of his father-in-law in Wymore, Neb. of his
July 15.
To Elden M. VanVickle (4511-1) for the death of his mother in Iowa, July 29.


Foot Race to Sandia Crest Not for Big Talkers

Running a couple of miles a day is be ing touted as the way to really keep fit. So you lope a few times around the shape, and you aren't quite as short of wind as you were when you started. You need a challenge - like entering the Fourth Annual La Luz Trail Race on Aug. 25.
The foot race starts to the north of the Juan Tabo picnic area at $8 \mathrm{a} . \mathrm{m}$. and ends 7.5 miles and 3700 feet higher to the eas in from Jia Crest house. Steven Gachup last two years, but close on his heels were entries from Los Alamos Scientific Laboratory, Jemez Pueblo and New Laguna
Ribbons will be awarded winners in these age categories: juniors, 14 through 16 championship, 17 through 29 , senior, 30 Everyone who finishes the race gets Everyone who finishes the race gets certificate
In addition, a traveling trophy, "The Ramon Leyba Memorial Trophy" is being established in memory of the winner of the 1965 race this year.
The race is sanctioned by the AAU. Milo Conrad (9121) is chairman of the race committee and has additional information His home telephone is 290-2909. Other Sandians who are helping are Jack Shoup 23412), who will head the Caur Thomso 4512, , who win head the Caravan Radio cations between the start and finish lines
(Editor's comment: That run-for-yourlife category may be taken literally, so best check with your doctor first.)

## Nursery Openings Announced

Sandia Day School Nursery has announced vacancies in the 4 to 5 -year-old age group for the term beginning Sept. 3 . Sandia Laboratories parents wishing to enroll their children can register anytime during August. The registration fee is \$5 and monthly tuition is $\$ 19$.

## 10 YEARS

J. E. Tarpley. Jr. 2642. H. L. Hawk. Jr. 9214, H. O. Pierson 5412. L. K. Jones
derman 2211, G3. T. Merren 2152. derman 2211, G. T. Merren 2152, N. F. Toly 8252, J. E. Uhl
1132. D. A. Paschal 2213, J. C. Miller 8168, Patricio Sancher
9411, C. R. Johnson 4252. M. W. Tucker 5224, Anthony Juskiewicz 3311 , and E. E. Simpson 8125 .

SHOPPING CENTER

## $\bullet$

 SHOPPING CENTER 298:8277s.


 center pole, S15. Whitaker, 2999.6523.



 phono-stereo. dark walnut, cabinet. Whiteman,
215., Virpinia $S E$ in rear, 299-0563.
 styled
after 5 .
5.5
HEATHKIT 227 COLOR SET, new last Christmas
 67 HoNDA 305 Scrambler, $\$ 395$. Morevood 2688-4488 Everinns.


 lother laeces. si45. Brownine 299.-6384.


STuDIO Couch, green \& blue Scotchuard print. bolster custions
Coril, 255 . 1186 . makes UNFRAMED MIRRRR. $30 " \times 30 "$, beveled edge,
SIS. Deveneaut, $299-4055$.
 HookEd RUG, $9 \times 12$ \& other carpeting, 21 ,


## real estate







LoT. corner of Can
${ }_{3}^{3}$-BRR R ROBERSNON, redecorated, landscaped. $\mathbf{1}^{3 / 4}$
 299.7280. Darae, many extras, \$19.500. Dyches Mossman brick \& stucco, 3 -ldr., LR w/fp, separ
 TRADE 59700 equity in 3 -bdr. $11 / 2$ bathss, plu
 $\$ 200$ Down, no qualifying. Bosuue Farms, 3. .bdre
 praisal at 518.500.
Street,
298 tems or or
2914
5-BDR., 3 bath, mother-in-law quarters adjoinin
 296 -1367 orf 299 -7849.
2 Lors in Knapp. Heieihts addition Montromery \& Louisiana, approx. $77^{\circ} \times 13130.1522250$ ea. withour

 CARS \& TRUCKS
153 plckup, Cher. $1 / 2$-ton, 3 -spd. trans. Van'63 GMC, PS, PB, AT. RRH, spotiont. Positraction,
new tires, $\$ 1350$. Duda, $2988-1790$.

 miles. Moore, 556 -0529.
 64 FORD GALAXIE 500, -dr. ATT. RS, AC, new
tire \& brakes, $\$ 950$. Rodeman, 256 -1889.

 ${ }^{5} 54$ CHEVROLETT Station Wagon, 6 -cyl., $\$ 100$

 ${ }^{56}$ FORD Fountry, Sudire station wagon, vs


56 PoNTIAC Starchief. 2.dr. . Hydramatic, $\$ 250$ or
best offer. Gower, 296 -4470. 64 CADILLAC, all lixury features,
best offer. Cooke, 59088 Natalie
NE. 61 PLYMMOUTH Station wanon, V8, PS, PB, 65,000 miles. Gerwin, 255-0380.
3.SEAT Oldsmobile wazon, 6 yrs. old, loaded with
extras, arailable for mechanic's inspection, $\$ 695$. ${ }_{61}^{61}$ FORD
 AWD JEEP station wayon chassy w/Ford veds

 ${ }^{2999-1213 \text {. }}$ WANTED

## WANTED

45 or 44 CALIBER REVOLVER. Makk, 282 -3482.
SHOP MANUL for 1963 Conarir. Dickason, 299. USED SCUBA GEAR. Fenn, 242-4679 after 5:30. Room Mate, funished huuse 10 min from woork.
 $j 01 \mathrm{~N}$ car pool from vicinity of Sunset \& Bridge to
802 or 880 . Baldonato, 264-7469. WEIGHT SET, 110 llss. Mauser, 299.5091 RENT 3 -bdr. furnished home. Patrick, 265-7264.


## FOR RENT



 3 -bir. Roberson,
3.BDR. ROBERSON, unfumished, comer Eubank \&
Shosinone Rd. Wentr,2
298 -2630. FURNISHED HOUSE, 3 -bdr. Ig. LR. newly-de.
Corated,


## LOST AND FOUND

## OST-Sunlasses. key chain, blue beads, cigarecte lighter





## Coronado Club Activitie

## Golden Nugget Night Set Tomorrow

The Coronado Club converts to a giant casino tomorrow night for the Golden Nugget event. Play money will be used, of course, but big winners will reap real prizes.
The games start at 8 p.m. and the kitchen staff will have delicious French dip sandwiches available (at 90 cents) all evening. Do the sagebrush shuffle with Elton Travis and his western band begin ning at 9 p.m

## Water Carnival

The annual water carnival in the Club's patio/pool area is scheduled Saturday, Aug. 24. Games, goodies and gregariousness will prevail. Water sports for kids and adults are planned. Mark your calendar now.

## Social Hours

Tonight, the TGIF group will enjoy the Club's fried chicken while Max Madrid makes the happy music. The buffet costs $\$ 1.25$ for adults, $\$ 1$ for kids.
On Friday, Aug. 16, the Mexican food buffet will be the featured attraction Sol Chavez and the mighty Duke City Brass will be on the bandstand.
Seafood, the kind New Mexicans like will be spread for the Aug. 23 buffet. Phil Graham will play for dancing.
On Friday nights Pat Reich and piano entertain with a sing-a-long in main lounge. Don't forget that the patio snack bar remains open until 8 p.m. on Friday evenings so the youngsters who prefer may have hamburgers and hotdogs while the old folks enjoy the social hour buffet

## Bridge

Duplicate bridge meets Mondays at p.m. Ladies bridge meets Thursday, Aug p.m. Ladies br

## Luncheon Fashion Show

A group of teenage models, members of a Sears student fashion advisory panel will model back-to-school clothes during Manson will be moderator.

Junior Bowlers to Organize
Organizational meeting for the Coronado Club Junior Bowlers (ages $8-16$ ) is scheduled Tuesday, Aug. 20, at 7 p.m. in the Club's El Dorado room. Parents are wel come to attend with their youngsters. Refreshments will be served.
After the league is organized, the group will bowl on Saturday mornings at the San Mateo Lanes. Additional information is available from Cis Kelly (3113), tel. 264-9248.

## Sandia Safety Signals

## Daydreaming - Inattention

How far does your car travel in five seconds at a speed of 40 to 50 miles per hour? About the length of a football field! What if you closed your eyes and let go of the wheel for that long? Closing your mind to the job of driving can be nearly as dangerous.
Many a serious accident has occurred because the driver closed his mind, even though not his eyes, for a moment while thinking of other things. It's called inattention to the job at hand.

## The Two-Second Rule

The National Safety Council recently proposed a new rule to avoid tailgating by allowing yourself two seconds worth of living room on the highway. You watch when the car ahead of you starts to pass a landmark, such as a culvert
or a roadside sign, and start counting or a roadside sign, and start counting -"one-thousand and one, one-thousand
and two." If your car reaches the same and two." If your car reaches
marker before you've finished counting off the two seconds, you are too close At 30 miles per hour, the rule gives you 88 feet of following space.


STRIKE IT RICH, says Sandy Jewett (4333), at the Coronado Club's Golden Nugge event tomorrow night. Big winners of play money will win real prizes. Elton Travis
will play for dancing.

## Annual Membership Party for Sanado Club Set Aug. 13

Mrs. S. D. Brooks, Sanado Woman's Club president, invites all ladies interested in joining Sanado to come to a punch party to be held in the ballroom of the Coronado Club Tuesday, Aug. 13, at 2 p.m. Club officers, board members and chairmen of Sanado interest groups will be on hand to greet prospective new members and answer any questions about the Club's activities.

Sanado is one of the largest and most active women's organizations in the city. Through its 16 different interest groups, a wide range of activities are conducted.
Anyone who is eligible for Coronado Club membership is also eligible for Sanado Club membership. This includes employees (or spouses) of Sandia Laboratories, AEC, Lovelace Foundation, EG\&G, and civilian employees of KAFB and Sandia Base.
No reservations are required to attend the punch party. Refreshments will be served and door prizes will be awarded.

## Welcome

Newcomers


## Congratulations

Mr. and Mrs. John Paul Stark (9413) a son, Glenn Alan, July 5.
Mr. and Mrs. Mike Silva (4511-2), a daughter, Melissa Christine, June 14.


ART PINO (4641) was the driving force behind organization of the Zia Little League
Baseball District. Eight teams participate; 100 youngsters benefit.

## For His Sons, Art Pino Organizes Zia Little League Baseball Teams

Happiness is not a warm puppy.
There are some kids who would rather play baseball than do anything else. Art Pino's two sons (age 9 and 11) are like that. Two years ago, they were told that they could not participate in Little League baseball teams because their neighborhood was not included in the organized districts.
Art (4614) is not the kind of guy to take the disappointment of his sons lightly. He organized a new Little League District, spearheaded a drive for funds, built an organization, and now the Zia League has just wrapped up its second successful season.
Eight teams and a total of about 100 boys participate. The Zia League playing fields, located a Southem and Elizabeth trets, with pero dan bas (ons), dur fenced win poman bad outs, and an equipment shed
ncially in the black and Art is happy but tired.
"I had never organized anything before," Art says. "All I did was talk, talk and talk We took care of the theusand they helped o into building a Little League district," Art signed a personal note for $\$ 857$ to purchase equipment to get the teams play ing the first season. Later on, the League conducted a money-making project that paid off Art's note and helped start con struction on the playing fields.
An arrangement was made with the City f Albuquerque to lease five acres of land. "Harry Kinney (1222), a City Commis sioner, was tremendously helpful in this, Art says. "Hundreds of people helped. We dug post holes, poured concrete, strung wire, chopped weeds and scrounged materials. Local businesses were generous."
The work is not finished. Art is nom nated for president of the Zia board of directors. This will be his third term on the board. Plans are already underway for next year.
with the two diamonds complete, Art

## Speakers

C. H. Purdue (2442), "Computer Aided Reliability Analysis and Design," Second Annual Summer Institute on Computer Aided Circuit Analysis and Design, Aug 12-16, University of Missouri.
C. D. Lundergan (5163), "The Initialization of a Stress Wave in a Characteristic Code," Washington State University Physics Department Seminar, July 30 , Pullman.
D. G. Schueler (2633), "Error Analysis of Angle of Incidence Measurements," International Conference on Recent Developments in Ellipsometry, Aug. 7-9, Lincoln Neb.
Albert Narath (5100), "Nuclear Magnetic Resonance Studies of Magnetic Impurities in Metals Below the Kondo Temperature, Washington
H. M. Willis (3130), "Sandia Training Programs," UNM graduate management class, July 23.
figures the League can handle about 24 teams next year - 300 more boys. The playing fields need improvementsbleachers for spectators, grass, sprinklers a public address system, scoreboards, permanent concession stands.
"More work," Art says. "We will need more coaches, umpires and assistants. But the work is worth it. There is a tremendous satisfaction in providing recreation for youngsters. Ask anybody who helped."
Among the Sandians who built the Zia League baseball district are Doyle Earnest he pipe for the backstops; Paul Spencer 7613) a the banare; Cilurt sonce (4231), a team manager; and Frank Durgin (4312), who serves as an umpire.

## SEGA Golfers Win <br> Interbase Tourney

A team of six Sandia Employees Golf Association (SEGA) golfers captured the 1968 Interbase Golf Tournament played at the University south course July 27-28 The event was medal play over 36 holes The SEGA team score of 947 was 36 strokes better than the score posted by the second place Kirtland team. This wa ween KAFB, Manzano, Sandia Base and SEGA.
Members of the SEGA champion team were Tom Crawley (7213), Jim Leonard (9521), Wendell Nelson (4137), Jerry Smith (9252), Larry Smith (5235) and Larry Woodard (7611).


BARRY GILKES (3464) displays a photo of the "Swoose," famous B17-D which saw
combat from late 1941 to the close of WW II and is now in the Smithsonian Institute The remaining aircraft of the 19 th Bombardment Group were lost in Pacific campaigns. Barry is chairman of the reunion committee which has arranged for a get-together of the 19th Bombardment Group veterans in Albuquerque Aug. 9-11. Barry saw action with the Group during the Korean conflict.

